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(12) **United States Plant Patent**  
**Gamache et al.**

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(54) **HOP PLANT NAMED "VGXP01"**

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patent is extended or adjusted under 35  
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(51) **Int. Cl.**<sup>7</sup> ..... **A01H 5/00**

(52) **U.S. Cl.** ..... **Plt./236**

(58) **Field of Search** ..... **Plt./236**

(56) **References Cited**

U.S. PATENT DOCUMENTS

PP10,956 P \* 6/1999 Lewis et al. .... Plt./236

\* cited by examiner

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(57) **ABSTRACT**

The new hop plant variety named 'VGXP01' is notable for  
its unique, pleasant aroma and relatively high alpha content.  
The cones of the new variety are small and compact, and  
grow abundantly on the mature plant.

**4 Drawing Sheets**

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Latin name of the genus and species being claimed:  
*Humulus lupulus*.

Variety denomination: 'VGXP01'.

**BACKGROUND AND SUMMARY OF  
INVENTION**

This invention relates to a new and distinct variety of hop  
plant, and more particularly to a new hop plant variety which  
was asexually reproduced from a hop plant of unknown  
origin discovered in a cultivated hop field in Toppenish,  
Wash.

The new variety was first discovered in 1990 in a hop field  
newly planted with 'Liberty' (unpatented commercial  
variety) hop plants. The new variety was readily distinguish-  
able from 'Liberty,' and so was monitored and observed  
during the first growing season. The large number of cones  
per plant and the unique aroma attracted the attention of the  
inventors. GLC analysis showed high alpha concentrations  
in the new variety, comparable to 'Galena' (unpatented  
commercial variety) and 'Nugget' (unpatented commercial  
variety) and significantly higher than 'Liberty.' Additionally,  
unlike 'Liberty,' the new variety was found to contain  
farnesene in the oil. The physical and chemical character-  
istics of the new variety were determined to be unlike those  
of any other known hop variety.

Based on the favorable analysis of the cones of the parent  
plant, soft wood cuttings were propagated for planting in  
1991 in Toppenish, Wash. The new variety has been stably  
reproduced over successive generations.

**BRIEF DESCRIPTION OF THE PHOTOGRAPHS**

FIG. 1 depicts hop cones of the new variety;

FIG. 2 depicts leaves of the new variety;

FIG. 3 depicts the bine and leaves of the new variety; and

FIG. 4 depicts the upper portion of a mature hop plant of  
the new variety.

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**DETAILED DESCRIPTION OF THE VARIETY**

The new hop plant variety is notable for its unique,  
pleasant aroma and relatively high alpha content. The cones  
of the new variety are small and compact, and grow abun-  
dantly on the mature plant.

Based on a comparison of spectrophotometer readings,  
the new hop plant is most similar to the Yugoslavian variety  
'Buket' (not patented). Both 'Buket' and 'VGXP01' have  
alpha levels higher than 8% and have farnesene in the oil.  
However, 'VGXP01' has a higher alpha level than 'Buket.'

The following is a detailed botanical description of the  
new and distinct variety of *Humulus lupulus*, based on  
observations of specimens grown in Toppenish, Wash. dur-  
ing the 1999, 2001, and 2002 growing seasons. All colors are  
described according to The Royal Horticultural Society  
Colour Chart. It should be understood that the botanical and  
analytical chemical characteristics described will vary  
somewhat depending upon cultural practices and climatic  
conditions, and can vary with location and season. Quanti-  
fied measurements are expressed as an average of measure-  
ments taken from a number of individual plants of the new  
variety. The measurements of any individual plant, or any  
group of plants, of the new variety may vary from the stated  
average.

**Bine:**

*Color*.—Yellow-green 145A.

*Stripe*.—Present.

*Stripe color*.—Green 138A.

*Stipule color*.—Yellow-Green 146C.

*Stipule direction*.—Up.

*Average diameter*.—0.7 cm (measurement taken at 75  
cm).

*Average internode distance*.—20 cm.

*Shoot emergence*.—After 'Cascade' (unpatented com-  
mercial variety); Before 'Galena'.

**Leaves:**

*Leaf arrangement*.—Opposite.

*Leaf shape*.—Palmate.

*Average length.*—18.8 cm.  
*Average width.*—11.1 cm.  
*Color — upper surface, mature.*—Green 137A.  
*Color — lower surface, mature.*—Green 138B.  
*Color — upper surface, immature.*—Yellow-Green 144B.  
*Color — lower surface, immature.*—Yellow-Green 144C.  
*Color — resin gland.*—Yellow 7A.  
*Number of leaf lobes.*—3 to 5, mostly 3.  
*Margin.*—Serrate.  
*Average serrations per inch.*—5.5.  
*Pose.*—Downward.  
*Average petiole length.*—5.8 cm.  
*Venation.*—Palmate.  
*Vein color.*—Yellow-Green 145A.

## Cones:

*Average length.*—17.6 mm.  
*Average diameter.*—12.5 mm.  
*Average number of cones per basal lateral node.*—91  
 (as many as 183 cones observed in some cases).  
*Color.*—Bract tip Green 143A. Bract base Yellow green 145C. Bracteole Yellow green 145B. Lupulin glands Yellow 6A.  
*Cone shape.*—Ovate.  
*Cone compactness.*—Medium to tight.  
*Average cone weight.*—80.6 mg.  
*Bract shape.*—Ovate.

*Bract tip shape.*—Mucronate.  
*Bract tip position.*—Recurved.  
*Bracteole shape.*—Ovate.  
*Bracteole tip shape.*—Rounded to subacute.  
*Harvest maturity.*—Compare to ‘Mt. Hood’ (unpatented commercial variety).  
*Shattering potential at harvest.*—Compare to ‘Columbus’ (U.S. Plant Pat. No. 10,956).  
*Powdery mildew resistance.*—Moderate — Compare to ‘Centennial’ (unpatented commercial variety).  
*Aroma.*—Sultry-sweet hop floral aroma, with highlighting citrus/orange accent notes and subtle pine undertones.

## Analytical data — official spectrophotometric method:

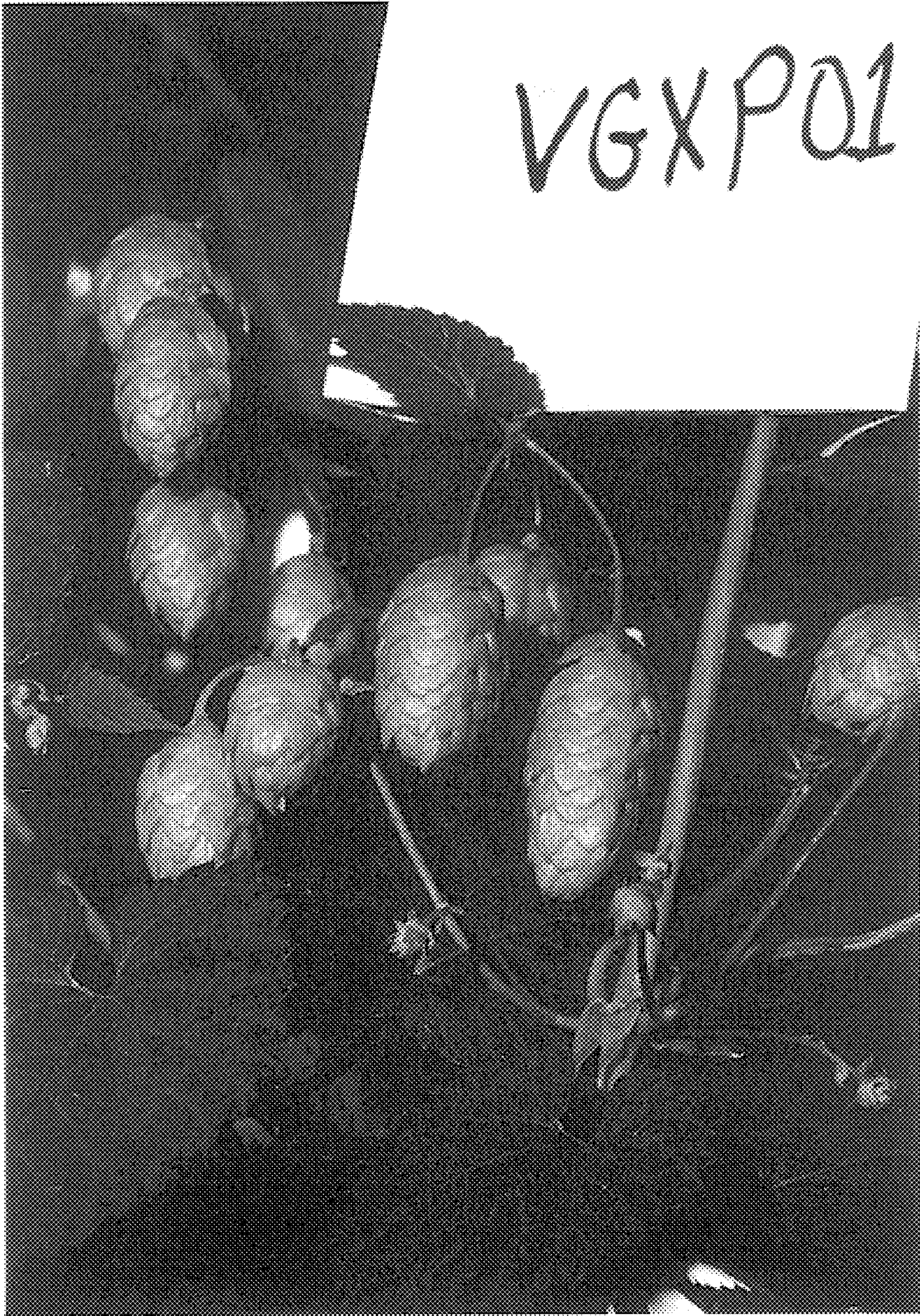
*Alpha acids.*—8–11% (dry weight basis).  
*Beta acids.*—7% (dry weight basis).  
*Alpha/beta ratio.*—1.14–1.57.  
*Cohumulone (% of alpha acids).*—24.1%.  
*Total oil (mL oil per 100 grams).*—1.78.  
*Myrcene (as % of total oils).*—70%.  
*Caryophyllene (as % of total oils).*—3%.  
*Humulene (as % of total oils).*—10%.  
*Farnesene (as % of total oils).*—3%.

## We claim:

1. A new variety of hop plant, substantially as herein shown and described.

\* \* \* \* \*





*FIG. 1*





*FIG. 2*





*FIG. 3*





*FIG. 4*